

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

DESCRIPTION OF A NEW SPECIES OF *SPHÆROMA*.*

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Mr. E. Ben Carter has sent to the U. S. National Museum a large number of individuals of an undescribed species of *Sphæroma*, found boring the piers on St. Johns River, at Palatka, Florida. Sections of the wood received at the same time had been reduced, during a period of eight years, from a diameter of 16 inches to one of $7\frac{1}{2}$ inches. The whole surface of the wood was bored with holes averaging in size about 5 mm. in diameter and in an end section arranged in concentric rings between the rings of annual growth, showing the little animal's preference for the soft pine. Very strong mandibles, projecting beyond the labrum in a most conspicuous manner, provide a perfect equipment for this destructive work. Spence Bate describes a species of *Sphæroma* from the Indian Peninsula with similar habits, with which the present species is compared.

Sphæroma destructor sp. nov.

Head twice as broad as long, having a small median projection. Eyes lateral and posteriorly situated. The first pair of antennæ, with a flagellum containing eight articles, reach the posterior margin of the head; the second pair of antennæ extend to the post-lateral angle of the first thoracic segment; its flagellum is twelve jointed.

The first and fourth thoracic segments are of equal length and are one and a half times longer than the other thoracic segments. The epimeral parts are distinct from the segments, are quite broad, and terminate laterally in acute angles, which point downward. The seventh thoracic segment bears four tubercles situated in a transverse line.



FIG. 3. — *Sphæroma destructor*.
Dorsal view. $\times 3$.

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The abdomen is composed of two distinct segments, on the first of which, the post-abdomen, there are two tubercles, one on either side of the median line. Suture lines at the sides of this segment indicate three coalesced segments. The terminal segment is triangularly shaped and rounded posteriorly with an upcurved margin, which extends all around the terminal half of the segment. The whole surface of the abdomen is thickly tuberculated with low but distinct tubercles, each one surmounted with a small tuft of stiff hairs or bristles. On the anterior part four large tubercles are situated in a transverse line, the two center ones being somewhat closer to each other than to the lateral ones. The uropoda extend beyond the extremity of the abdomen, the outer branch being the longer. Both are pointed and similar in shape. The outer edge of the exopodite is provided with four teeth, while that of the endopodite is smooth.

The legs of this species are in three series, according to structure, the first three pairs being alike, the fourth and fifth similar, and the sixth and seventh similar. The legs of the first series are long and slender (fig. 5, *a*), with the second joint or basis nearly cylindrical in shape. The ischium is nearly as long as the basis, and this joint, as well as the merus, is furnished with long straight hairs. The carpus and propodus are likewise long and slender. The legs of the second series, the fourth and fifth pairs, are stout and short, being similar in general form, though differing somewhat in relative proportions. The basis is about half the length of the entire leg, while the joints following the ischium are very short. In the third series the legs are nearly as long as those of the first series, but differ in size and shape. They are stouter and not cylindrical.

The whole surface of the body is punctate, and has minute transverse rugæ between the points of depression. In color it is a dark brown, shaded on the edges with a lighter brown.

Type.—U. S. Nat. Mus., No. 19857.

In the Ann. of Nat. Hist.* Spence Bate describes a new species of *Sphaeroma*, *Sphaeroma vastator*, which was procured "from a piece of wood which had formed part of a railway bridge over one of the backwaters of the West Coast of the Indian Peninsula." The wood is described as being "honeycombed with cylindrical holes, in many of which the

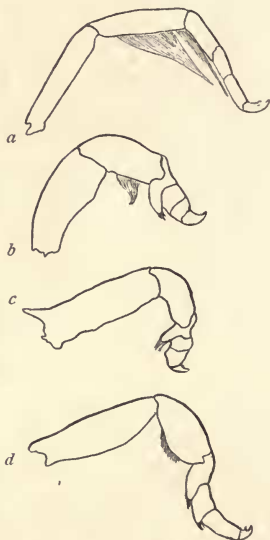
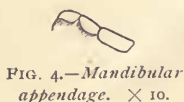


FIG. 5.—Legs. X 10.
a. Leg of 1st pair.
b. " 4th "
c. " 5th "
d. " 6th "

* (3) Vol. XVII, 1866, pp. 28-31, pl. ii, fig. 4.

animal was rolled up like a ball." Notwithstanding the close resemblance in habits and appearance of this species, as described and figured, to the present one, there are four points of difference :

I. *The number and arrangement of the tubercles in the two species.*—In *S. vastator* four tubercles are described on each of the last three segments of the thorax, and only two are figured on the anterior portion of the pleon. In the species under discussion, however, there are four tubercles on the seventh segment of the thorax only and six on the abdomen, two on the post-abdomen, and four on the anterior portion of the caudal shield.

II. *The structure of the feet.*—In *S. vastator* the legs of the first three pairs are not proportionately as long as those of the present species. The merus is differently shaped, not being cylindrical in that species, and is relatively shorter. Although Spence Bate mentions no dissimilarity in structure in the legs of the fourth and fifth pairs, still a difference is shown in the cut in the formation of the merus. With our species the difference in these two pairs of legs is merely in proportion. There is a greater resemblance in the sixth and seventh pairs of legs of the two species.

III. *The upcurved margin of the posterior half of the terminal segment of the abdomen.*

IV. *The presence of numerous tubercles furnished with bristle-like hairs upon the abdomen.*

Neither of these points are mentioned in the description of *Sphæroma vastator*.